

US Department of Transportation  
Dockets Management Facility  
1200 New Jersey Avenue, S.E.  
Washington, DC 20590

Re: Docket No. : FHWA-2007-28977

Dear FHWA,

TAPCO apologizes for not providing comments to the docket earlier and we hope FHWA will consider these comments during the docket review process. TAPCO comments to January 2, 2008 NPA-MUTCD as follows

TAPCO agrees with the FHWA text however we suggest the following modifications to parts 2 and 7. REASON: In part 6 there is a detail description of the use of LEDs on signs therefore there should be reasonable description in parts 2 and 7 similar to the detail descriptions in part 6 for LEDs. In addition because the signs in parts 2 and 7 are larger the width of the boarder on these signs is also larger. Therefore the LEDs on these signs should be larger i.e. 1.25 inch or greater. Since the purpose of the LEDs on signs, is to increase conspicuity the larger LEDs should provide greater visibility.

#### MUTCD text modifications / recommendations

Page 616 **Section 2A.07 Retroreflectivity and Illumination** – TAPCO agrees with the FHWA text however we suggest the following modifications.

Line 5 **Standard:**

Line 6 **If used, the LEDs shall be the same color as the sign legend, border, or background. . If the sign border is black then the LEDs shall be white or the color of the sign background.**

Page 625 lines 33-49 **Section 2B.02 Design of Regulatory Signs** TAPCO agrees with the FHWA text however we suggest the following option and standard modification.

**Option:**

The Rectangular regulatory signs may be modified to improve conspicuity by incorporating white or red flashing lights on the Rectangular regulatory signs face

A. A series of eight or more small white lights no larger than 1.25 inch in diameter along the border or outer edge of the sign, arranged in an rectangular pattern along the border of the Rectangular regulatory sign face.

B. A series of white lights forming the shapes of the letters in the legend.

**Standard:**

**If flashing lights are used on the Rectangular regulatory signs, their colors shall be all white or all red. If more than eight flashing lights are used, the lights shall be arranged such that they clearly convey the Rectangular regulatory signs shape of the Regulatory sign . If flashing lights are used on the Rectangular regulatory signs, the flash rate shall be at least 50, but not more than 60, flashes per minute.**

Page 627 lines 27-52 **Section 2B.05 STOP Sign (R1-1) and ALL WAY Plaque (R1-3P)**

TAPCO agrees with the FHWA text however we suggest the following modifications.

**Option:**

The STOP sign may be modified to improve conspicuity by incorporating either white or red flashing lights on the STOP face

A. A series of eight or more red lights no larger than 1.25 inch in diameter along the outer edge of the sign, arranged in an octagonal pattern at the eight corners of the border of the STOP sign face.

B. A series of white lights forming the shapes of the letters in the legend.

**Standard:**

**If flashing lights are used on the STOP sign, their colors shall be all white or all red.**

**If more than eight flashing lights are used, the lights shall be arranged such that they clearly convey the octagonal shape of the STOP sign. If flashing lights are used on the STOP sign, the flash rate shall be at least 50, but not more than 60, flashes per minute.**

Page 629 lines 46- 50 **Section 2B.08 YIELD Sign (R1-2)** TAPCO agrees with the FHWA text however we suggest the following modifications.

**Option:**

The Yield sign may be modified to improve conspicuity by incorporating either white or red flashing lights on the Yield face

A. A series of six or more small white or red lights no larger than 1.25 inch in diameter along the outer edge of the sign, arranged in an equilateral triangle pattern along the border of the Yield face

B. A series of white lights forming the shapes of the letters in the legend.

**Standard:**

**If flashing lights are used on the Yield sign, their colors shall be all white or all red.**

**If more than six flashing lights are used, the lights shall be arranged such that they clearly convey the equilateral triangle shape of the Yield sign.**

**If flashing lights are used on the Yield sign, the flash rate shall be at least 50, but not more than 60, flashes per minute.**

Page 670 lines 24- 43 **Section 2C.03 Design of Warning Signs**

TAPCO agrees with the FHWA text however we suggest the following modifications.

**Option:**



The Warning sign may be modified to improve conspicuity by incorporating either white or yellow flashing lights on the Warning sign face

A. A series of eight or more small white or yellow lights no larger than 1.25 inch in diameter along the border of the Warning sign, arranged in an diamond pattern along the border of the Warning sign face;

B. A series of white lights forming the shapes of the letters in the legend.

**Standard:**

**If flashing lights are used on the Warning sign, their colors shall be all white or all yellow.**

**If more than eight flashing lights are used, the lights shall be arranged such that they clearly convey the diamond shape of the Warning sign.**

**If flashing lights are used on the Warning sign, the flash rate shall be at least 50, but not more than 60, flashes per minute.**

Page 1072 lines 19-46 **Section 7B.02 Illumination and Reflectorization** TAPCO agrees with the FHWA text however we suggest the following modifications and feel a section should be added to describe the design of the **School Warning Signs** and clarify the intent of the use of LEDs

**Section 7B.xx Design of School Warning Signs (S1-1)(a new MUTCD section describing the S1-1 sign although the diagram of the sign is shown in the MUTCD)**

**Standard:**

All School warning signs shall be pentagon-shaped (with the point towards the top of the sign) with a black legend and border on a yellow background unless specifically designated otherwise. School warning signs shall be designed in accordance with the sizes, shapes, colors, and legends contained in the "Standard Highway Signs" book (see Section 1A.11).

**Option:**

The School Warning sign may be modified to improve conspicuity by incorporating either white or yellow flashing lights on the School Warning sign face

A. A series of five or more small white or red lights no larger than 1.25 inch in diameter along the border of the School Warning sign, arranged in an pentagon pattern along the border of the School Warning sign face; If the warning sign is a diamond shape see section 2C.03

B. A series of white lights forming the shapes of the letters in the legend.

**Standard:**

**If flashing lights are used on the School Warning sign, their colors shall be all white or all yellow.**

**If more than five flashing lights are used, the lights shall be arranged such that they clearly convey the octagonal shape of the School Warning sign. If flashing lights are used on the School Warning sign, the flash rate shall be at least 50, but not more than 60, flashes per minute.**